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ABSTRACT

The retention of five cohorts of first-time freshmen and transfer students who reenrolled for 8 years in a nonresidential urban institution was investigated. Attention was directed to the effects of sex, race, and grade point average on retention, differences in retention for first-time freshmen and transfer students, and the extent to which students obtain baccalaureate degrees in 4 years. The longitudinal study focused on students who were enrolled during 1975-1979 and reenrolled through 1982 at the University of Missouri-St. Louis. About 86 percent of the students were white, and almost half attended school part-time. The results show that there was a substantial and constant decline in the percent of first-time freshmen and transfer students who entered since 1975 and reenrolled during the first 4-year period. The retention of first-time freshmen was higher than that of transfer students for the first 4 years. On the other hand, the cumulative percentage of transfer student graduates by the fourth year was almost double that of the first-time freshmen. The average grades for students who persisted in school rose for each succeeding year. A small but consistently higher retention rate was found for males compared to females. (SW)

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CORRELATES OF STUDENT RETENTION

An eight year study

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THE ASSOCIATION FOR INSTITUTIONAL RESEARCH

This paper was presented at the Twenty-Fourth Annual Forum of the Association for Institutional Research held at the Hyatt-Regency in Fort Worth, Texas, May 6-9, 1984. This paper was reviewed by the AIR Forum Publications Committee and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC Collection of Forum papers.

Daniel R. Coleman, Chairman
Forum Publication
Advisory Committee

ABSTRACT

Declining enrollments are of timely concern to academic administrators. The objective of this longitudinal study was to examine the retention of five cohorts of first-time freshmen and transfer students who reenrolled for eight years in a nonresidential urban institution against correlates such as total enrollment, sex, race, and grade point average. Given the sophistication of a computerized enrollment system, it was possible to track individual students at the time of reenrollments in spite of "stopping out periods." The results of this study provide an invaluable aid to administrators when making reallocation decisions which will affect the identification of students who persist, the examination of recruitment efforts, and the formulation of admission policies.

CORRELATES OF STUDENT RETENTION

An eight year study

Given the decline in the birthrate and the consequential decrease in university enrollments, administrators in institutions of higher education are eager for information that can help them better understand the reasons for attrition and can give directions to their efforts to retain students. With limited educational and financial resources they seek to enhance the probabilities that students will complete their studies. Although leaving an institution of higher education before earning a degree may be a positive step for some students (Sanford, 1956; Summerskill, 1962), it may be an impediment in career development for others. The retention of students at urban institutions, particularly nonresidential ones, is important since a majority of students are enrolled part time and usually take more than four years to earn a baccalaureate degree. This means that fiscal and programmatic considerations must reflect long range planning encompassing longer than four years.

The objective of this longitudinal study was to examine the retention rates of first-time freshmen and transfer students who enrolled at a public nonresidential university against correlates such as total enrollment, sex, race, and grade point average, the latter differentiated by race and sex.

The following questions were asked:

1) To what extent do urban university students obtain baccalaureate degrees in four years?
2) To what extent do variables such as sex, race, or grade point average affect student retention?

3) To what extent is the retention rate among first-time freshmen different from transfer students?

REVIEW OF PREVIOUS RESEARCH

A review of the literature indicates past research has failed to distinguish among different types of college-leaving behavior, i.e. between dropping out (leaving an institution and never returning) and stopping out (leaving for a period of time but returning for additional study and usually graduation). The inadequacy of much of the past research has been attributed to ambiguous definitions of terms as well as shortcomings conceptualizing the dropout/stopout process. In addition, misinterpretations have led to erroneous implications of the data on student attrition.

To avoid such problems, this study concentrated on the returning students. A first-time freshman was identified as a degree-seeking student who has had no prior college experience or credit through College Level Examination Program, advanced placement, departmental examinations, or freshmen placement examinations. A transfer student was one who had earned college credit prior to the first day of the fall semester. Retention occurred when a student continued, resumed, or completed his or her studies. Attrition occurred when a student left an institution and did not return.

In a Policy Brief for the American Council on Education, Jackley and Henderson (1979) indicate that only four out of ten entering freshmen are likely to receive baccalaureate degrees from the same institution within four years. Although most students transfer and eventually finish, three out of ten probably never earn a degree. Lea, Sedlacek and Stewart (1979) found that nationwide studies on student retention tended to obviate institutional

differences. Therefore, local studies, although admittedly limited for generalizations, allow administrators to focus their efforts. Longitudinal studies of nonresidential urban institutions are scarce; yet, it is the long term analyses which provide the perspectives on multiple correlates so that students who have potential to remain or leave may be identified.

METHODOLOGY

This study is an eight year analysis of five cohorts of first-time freshmen and transfer students who enrolled in Fall 1975 through Fall 1979 and subsequently continued to reenroll through Fall 1982 at the University of Missouri-St. Louis (UMSL), a nonresidential public urban university, in the St. Louis metropolitan area. Ninety-eight percent of UMSL's 11,750 headcount students commute from within a radius of 20 miles of the campus. The average age of the undergraduate and graduate student body combined is 27 years. Approximately 86% of the students are white; 50% are female; and 50%, male. Almost half of UMSL's students are in school on a part-time basis. Some hold responsible positions in private business and industry or in government agencies. Even full-time students hold part-time jobs or participate in internship programs. It is, therefore, not unreasonable to expect part-time students to take more than four years to obtain a degree.

The data for this study were gathered from the Student Information System, a highly sophisticated and computerized enrollment program adequate enough to allow for tracking of individual students through stopping out period and reenrollment at each fall semester. Analyses of trends are invaluable since the students at an urban institution engage in much in/out attendance (that is,

they enroll for one or two semesters, stop out for some time and then return, sometimes to graduate, sometimes to study until another stop out period).

Matrices for this study were designed to show a series of cross entries of students in their entering semesters against all subsequent semesters through Fall 1982. Within each cell there were two entries, one showing the number of original entering cohorts who returned and the second showing the number of cohorts who graduated up to and including that semester. Retention and attrition were then made a dichotomous variable and tabulated against several correlates such as total enrollment, sex, race and grade point average (differentiated by race and sex). The analyses consisted of application of one of the standard routines from statistical packages which calculates cross tabulation for selected variables.

RESULTS

The results show that there is a substantial and constant decline in the percent of first-time freshmen and transfer students who entered since 1975 and reenroll during the first four year period. The retention rate for all cohorts is remarkably similar.

The retention of first-time freshmen (Table 1) is higher than that of transfer students (Table 2) for the first four years. On the other hand, the cumulative percentage of transfer students graduates by the fourth year is almost double that of first-time freshmen. Different educational goals may explain this variance. Some students, especially at an urban institution, may not seek degrees. Their goals may include upgrading skills, learning about another area of employment, or continuing their education until they can transfer to a residential campus.

Table 1. Percent of first-time freshmen students retained.

Semester and Year Entered	F'76	F'77	F'78	F'79	F'80	F'81	F'82	N
Fall 1975	57	41	36	21(13)[a]	9(24)	6(26)	6(27)	1731
Fall 1976		58	40	35	22(13)	11(23)	8(26)	1452
Fall 1977			57	41	36(2)	20(14)	9(24)	1469
Fall 1978				59	45	40(2)	23(15)	1456
Fall 1979					60	43	37(1)	1446

[a]Percent in parenthesis indicates cumulative graduates.

By the fifth year and subsequently, the retention rates of both groups of students, first-time freshmen and transfer students, decline slightly while the graduation rates remain relatively constant or rise slightly, but with no significant difference.

Table 2. Percent of transfer students retained.

Semester and Year Entered	F'76	F'77	F'78	F'79	F'80	F'81	F'82	N
Fall 1975	47(1)[a]	26(9)	15(17)	8(22)	6(25)	5(25)	4(27)	1529
Fall 1976		48(1)	26(11)	14(20)	9(25)	6(27)	3(29)	1412
Fall 1977			44	28(8)	14(17)	8(23)	5(25)	1418
Fall 1978				44(1)	27(9)	16(18)	8(23)	1323
Fall 1979					46	29(8)	17(16)	1430

[a]Percent in parenthesis indicates cumulative graduates.

The study shows there is a small but consistently higher retention rate of males over females for both full-time freshmen and transfer students within cohorts and across cohorts.

A racial difference in retention is apparent. White students, especially first-time freshmen, hold a consistently higher retention rate over black students. This evidence was equivocal although less pronounced for transfer students.

There appears to be a strong positive relationship between grades and retention for both first-time freshmen (Table 3) and transfer students (Table 4). The average grades for students who retain rise each succeeding year. As expected, students with lower grades withdraw with proportionately greater numbers. While the grade trends are approximately the same for both races and sexes of full-time freshmen and transfer students, the grade levels differ. White women score highest followed in order by white men, black women, and black men.

CONCLUSION

The results of this study are an invaluable aid to administrators when identifying students who will persist in order to obtain a baccalaureate degree. This study can serve as a basis in formulating recruitment efforts and reexamining admission policies. Administrators can reallocate resources in order to improve the retention of low achievers or of transfer students and to identify other means of helping those students who otherwise might not return.

Although retention and graduation trends have been identified, the depressed economic condition of the nation has had severe effects on student enrollments. In addition, many universities have constantly adjusted their student fee structure and/or added surcharges. How the anticipated economic

Table 3. Median grade-point averages of first-time freshmen students retained according to race and sex.

Semester and Year	GPA's: Black Female/White Female; Black Male/White Male							
	F'75	F'76	F'77	F'78	F'79	F'80	F'81	F'82
Fall '75	1.32/2.50	1.73/2.80	2.02/2.81	2.18/2.89	2.26/2.73	1.94/2.77	1.98/2.72	1.94/2.79
	1.29/2.13	1.55/2.37	1.96/2.46	2.08/2.52	2.16/2.46	1.77/2.38	1.74/2.29	1.97/2.28
Fall '76		1.35/2.42	1.68/2.69	1.94/2.84	2.28/2.90	2.21/2.70	1.91/2.50	2.12/2.56
		1.25/2.18	1.71/2.40	2.07/2.44	2.15/2.55	2.22/2.40	1.74/2.29	1.69/2.32
Fall '77			1.35/2.45	2.07/2.63	1.99/2.75	2.34/2.81	2.11/2.57	1.47/2.43
			1.21/2.19	1.50/2.47	1.60/2.51	1.83/2.54	2.17/2.39	1.60/2.18
Fall '78				1.40/2.63	1.91/2.73	1.98/2.78	2.14/2.86	2.22/2.69
				1.40/2.22	1.87/2.41	1.99/2.46	2.11/2.46	2.14/2.41
Fall '79					1.46/2.59	1.68/2.68	2.04/2.78	2.16/2.84
					1.44/2.32	1.83/2.39	2.20/2.46	1.99/2.49

Table 4. Median grade-point averages of transfer students retained according to race and sex.

Semester and Year	GPA's: Black Female/White Female; Black Male/White Male							
	F'75	F'76	F'77	F'78	F'79	F'80	F'81	F'82
Fall '75	1.71/2.70	1.96/2.88	2.05/2.96	1.92/2.85	1.87/2.78	2.06/2.80	1.41/2.84	1.81/2.82
	1.44/2.16	1.76/2.45	1.93/2.47	1.89/2.37	1.71/2.44	1.80/2.39	1.51/2.20	2.07/2.07
Fall '76		1.85/2.78	2.11/3.04	2.18/3.07	2.19/2.98	2.00/2.94	1.89/2.88	2.12/2.82
		1.48/2.32	1.81/2.53	2.02/2.55	2.21/2.50	2.39/2.48	2.15/2.35	3.33/2.54
Fall '77			1.64/2.68	2.37/3.01	2.21/3.04	2.14/2.97	2.07/2.93	2.14/2.77
			1.46/2.34	2.06/2.53	2.45/2.53	2.20/2.39	1.64/2.43	1.81/2.26
Fall '78				1.63/2.68	2.06/2.91	2.24/2.90	2.13/2.80	2.22/2.86
				1.47/2.23	1.79/2.49	1.90/2.47	1.80/2.40	2.38/2.42
Fall '79					1.46/2.60	2.05/2.75	2.09/3.03	2.06/2.95
					1.44/2.33	1.84/2.49	1.97/2.52	1.71/2.53

upswing will affect future student retention rates must be examined. It is intended, therefore, that this study be extended for at least three, and probably five, more years.

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